# UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF NEW YORK

MICHAEL PHILIP KAUFMAN,	
Plaintiff,	
v.	Case No. 16-CV-02880-LTS
MICROSOFT CORPORATION,	
Defendant.	

# <u>DEFENDANT MICROSOFT CORPORATION'S</u> <u>CLAIM CONSTRUCTION BRIEF</u>

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#### I. INTRODUCTION

Microsoft proposes constructions, where needed, that clarify the dense language of a few limitations. These constructions are fully supported by the intrinsic record. Kaufman, on the other hand, proposes constructions that redraft the claims and import limitations that do not help to understand claim language and would confuse the jury. For instance, four of the terms Kaufman proposes for construction are part of a single limitation that Microsoft identified for construction, yet Kaufman proposes four inconsistent constructions, which obfuscate the larger limitation. In addition, Microsoft raised the issue of indefiniteness in its LPR 7 contentions and seeks to resolve that legal issue during claim construction. Despite being on notice of Microsoft's position, Kaufman elected not to identify any corresponding structure to support the functional language of the claims. At bottom, the specification lacks sufficient structural disclosure and claims 1, 4, and 5 are thus invalid as indefinite.

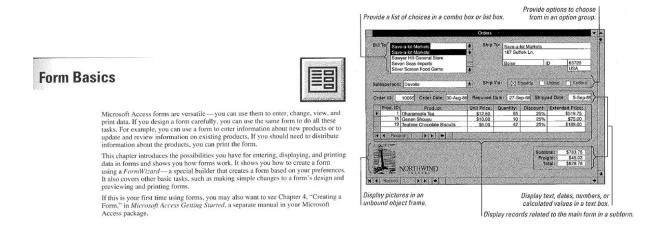
### II. BRIEF OVERVIEW OF THE BACKGROUND TECHNOLOGY

U.S. Patent No. 7,885,981 ("the '981 patent") is generally directed to automatically creating a "front-end program" or "application" that includes user interfaces for accessing a relational database. Such interfaces existed in the past, but they were manually created by a computer programmer.

Relational computer databases were well known at the time of the '981 patent's filing. The idea was pioneered by E.F. Codd of IBM in the 1970s. (Ex. 1, E.F. Codd, <u>A Relational Model of Data for Large Shared Data Banks</u>, 13 Comm. of the ACM 377 (1970).) Over the decades, a number of commercially-available relational databases were offered, including Microsoft's Access and Oracle's flagship product of the same name, Oracle.

Tools to assist developers in designing and implementing applications using these databases were provided with the products. For example, in 1992 Microsoft's Access

automatically generated user interfaces for its relational database through a tool called a "Form Wizard":



(Ex. 2, Microsoft Access 1.0 User's Guide 187, 214 (1992).) A tool for the Oracle database was called Designer and had similar functionality. A 1999 paper describing Designer shows automatically creating user interfaces reflecting each of the basic data operations performed in a database (create, retrieve, update, and delete—the so-called "CRUD" operations):

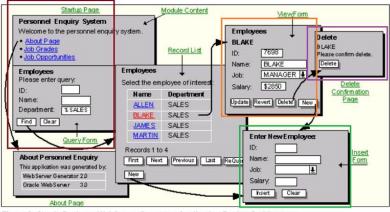


Figure 2: Oracle Designer WebServer Generator Application Design Architecture

(Ex. 3, Keith Atkins, <u>Oracle Designer Webserver Generator Tips and Tricks</u>, East Coast Oracle Users Group (ECO '99) (1999), at Fig. 2.)

### III. LEGAL STANDARDS

#### A. Standards for claim construction

It is the Court's role to resolve disputes regarding the scope of the asserted claims. <u>O2</u> <u>Micro Int'l Ltd. v. Beyond Innovation Tech. Co.</u>, 521 F.3d 1351, 1360 (Fed. Cir. 2008). "[T]he court's obligation is to ensure that questions of the scope of the patent claims are not left to the jury." <u>Every Penny Counts, Inc. v. Am. Express Co.</u>, 563 F.3d 1378, 1383 (Fed. Cir. 2009).

Courts "construe the claim as written, not as the patentees wish they had written it." <a href="Chef">Chef</a> <a href="Chef">Chef</a> <a href="Am., Inc. v. Lamb-Weston, Inc.">Meston, Inc.</a>, 358 F.3d 1371, 1374 (Fed. Cir. 2004). "Claim terms are generally given their plain and ordinary meanings to one of skill in the art when read in the context of the specification and prosecution history." <a href="Hill-Rom Servs.">Hill-Rom Servs.</a>, Inc. v. Stryker Corp., 755 F.3d 1367, 1371 (Fed. Cir. 2014), <a href="Cert. denied">Cert. denied</a>, 135 S. Ct. 719 (2014). Only two instances warrant departure from this rule: lexicography and disavowal. <a href="Id.">Id.</a>. Terms are read in context, such that "even if [a term's] meaning is plain on the face of the claim language, the patentee can, by acting with sufficient clarity, disclaim such a plain meaning or prescribe a special definition." <a href="In-re-Papst Licensing Digital Camera Patent Litig.">In re-Papst Licensing Digital Camera Patent Litig.</a>, 778 F. 3d 1255, 1261 (Fed. Cir. 2015) (citations omitted). "Where the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent." <a href="Scimed Life">Scimed Life</a> <a href="Sys.">Sys.</a>, Inc. v. Advanced Cardio-Vascular Sys., Inc., 242 F.3d 1337, 1341 (Fed. Cir. 2001).

### **B.** Indefiniteness

Questions of claim construction include whether claim language invokes 35 U.S.C. § 112, ¶ 6. See Williamson v. Citrix Online, LLC, 792 F.3d 1339, 1351 (Fed. Cir. 2015) (en banc). Section 112, paragraph 6 allows a patentee to draft claim terms "as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof." 35 U.S.C. § 112, ¶ 6. Such claims cover only "the structure, materials, or acts described"

Williamson, 792 F.3d at 1347–48. "When a claim term lacks the word 'means,' . . . § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to 'recite sufficiently definite structure' or else recites 'function without reciting sufficient structure for performing that function." Id. at 1349 (internal citation omitted); see Media Rights Techs., Inc. v. Capital One Fin. Corp., 800 F.3d 1366, 1371 (Fed. Cir. 2015), cert. denied, 136 S. Ct. 1173 (2016) (applying Williamson to a method claim); Seal-Flex, Inc. v. Athletic Track & Court Const., 172 F.3d 836, 843 (Fed. Cir. 1999) (applying § 112, ¶ 6 to a method claim).

Once a court determines to subject a claim term to  $\S 112, \P 6$ , it is construed using a two-step process to identify the function and the disclosed structure for performing that function:

The court must first identify the claimed function. Noah Sys., Inc. v. Intuit Inc., 675 F.3d 1302, 1311 (Fed. Cir. 2012). Then, the court must determine what structure, if any, disclosed in the specification corresponds to the claimed function. Where there are multiple claimed functions, as we have here, the patentee must disclose adequate corresponding structure to perform all of the claimed functions. Id. at 1318–19. If the patentee fails to disclose adequate corresponding structure, the claim is indefinite. Id. at 1311–12.

### Williamson, 792 F.3d at 1351–52.

A generic computer or microprocessor is insufficient structure for performing a claimed function. Finisar Corp. v. DirecTV Grp., Inc., 523 F.3d 1323, 1340 (Fed. Cir. 2008); Aristocrat Techs. Australia Pty Ltd. v. Int'l Game Tech., 521 F.3d 1328, 1333 (Fed. Cir. 2008). Rather, in a computer-implemented means-plus-function claim, the specification must "disclose an algorithm for performing the claimed function." Advanced Ground Info. Sys., Inc. v. Life360, Inc., 830 F.3d 1341, 1349 (Fed. Cir. 2016) (quotation omitted). "The specification can express the algorithm in any understandable terms including as a mathematical formula, in prose, . . . as a flow chart, or in any other manner that provides sufficient structure." Id. (quotation omitted).

#### IV. DISPUTED CLAIM TERMS

A. "wherein said relational database may be of any arbitrary size or complexity" (all claims)

Kaufman	Microsoft
The schema, rather than the data within the	The claim term lacks support in the
database, may be of any arbitrary size or	specification; otherwise, plain and ordinary
complexity	meaning.

Kaufman requests construction for two terms that appear only in the preamble of the asserted claims, which he posits are limiting. (K.Br. 8-11, D.I. 39.) See Proveris Sci. Corp. v. Innovasystems, Inc., 739 F.3d 1367, 1372–73 (Fed. Cir. 2014) (holding a preamble is limiting if it recites essential steps or it is necessary to give "life, meaning, and vitality" to the claim); Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed. Cir. 2002). If limiting, then this term lacks support in the specification. See Ziarno v. Am. Nat'l Red Cross, 55 F. App'x 553, 555–56 (Fed. Cir. 2003) (affirming jury verdict that preamble claim term, construed during Markman, yielded asserted claims invalid for lack of written description support in the specification).

The "wherein" clause is broadly written and uses language otherwise easily understood, and therefore requires no departure from its plain and ordinary meaning. See Hill-Rom, 755 F.3d at 1371 (noting two situations requiring deviation from plain meaning). For example, "arbitrary size" and "complexity" are easily understood and "relational database" is a well-known term to those of skill in the art. There can be no dispute that the claims relate to a relational database of any arbitrary size and complexity.

a mini-trial on validity).

<sup>&</sup>lt;sup>1</sup> The issue of written description may be addressed at a different time from the issue of claim construction. See <u>Driessen v. Sony Music Entm't</u>, 640 F. App'x 892, 896 (Fed. Cir. 2016), <u>cert. denied</u>, 137 S. Ct. 129 (2016) (affirming district court's grant of summary judgment of invalidity for lack of written description, where terms in question were construed during <u>Markman</u>); <u>see</u> also Hill-Rom, 755 F.3d at 1371 (cautioning courts not to allow claim construction to morph into

In contrast, Kaufman fails to explain why the term needs construction, much less why his proposed construction would help anyone understand it. Kaufman rewrites the plain language of the term by essentially proposing that "relational database" means one piece of the relational database—the schema—but not the data the schema defines. (K.Br. 8-10.) This is improper. Chef Am., 358 F.3d at 1374 ("courts may not redraft claims"). First, Kaufman's proposed construction is inconsistent with his understanding of "relational database" and "schema." For instance, Kaufman agrees that a relational database and its schema are distinct things. (K.Br. 2 (describing relational database), 5 (stating schema is another word for a "data dictionary").) A schema may be part of a relational database, but it is not a relational database. Both need data. Kaufman fails to explain why the limitation only applies to a portion of the database.

Moreover, the specification does not support equating "relational database" to "schema." Although the specification does not provide any special definition for the term "relational database" or "database," it does provide a definition for "schema" while discussing the related art, and defines it as a part of the database:

Developing such a database system consists both in defining the organizational structure to be used by the back-end for storing data (that is, the complement of tables which store data, and the relational links between these tables)—known as a "schema" or "data model"—and in building a front-end program (or "application") via which end-users can manipulate this data (and which communicates with the back-end on the users' behalf).

(Ex. 5, '981 patent, 2:41-48 (emphasis added).) Thus, Kaufman's construction is inconsistent with the claim language, the specification, and the extrinsic evidence. If Kaufman had intended to limit the preamble to just a schema for the database, he could have used that term instead.

2000).) The dictionary provides a separate definition for "relational database schema." (<u>Id.</u>)

<sup>&</sup>lt;sup>2</sup> For context, The Authoritative Dictionary of IEEE Standards Terms defines "relational database" to mean "[a] database that represents data as a collection of tables linked through common entries." (Ex. 4, The Authoritative Dictionary of IEEE Standards Terms 951 (7th ed.

## B. "automatically generating" (all claims)

Kaufman	Microsoft
The "generating" - comprising steps (a), (b),	Plain and ordinary meaning.
and (c) - is carried out upon being triggered	
by a user, without requiring further	
intervention by the user in order to complete	
the generation of the UI.	

The claim term "automatically generating" appears only in the preamble of the asserted independent claims. (K.Br. 10-11, D.I. 39; see supra Section IV.A.)

Common words need no construction. <u>Baltimore Aircoil Co. v. SPX Cooling Techs., Inc.</u>, No. CIV. CCB-13-2053, 2015 WL 5102872, at \*4 (D. Md. Aug. 28, 2015) ("Generally' does not need to be construed here because it is a common word whose plain and ordinary meaning is clear on its face."). Kaufman requests that the Court construe common words whose plain and ordinary meaning is clear on its face.

Kaufman fails to explain why "automatically generating" requires construction and why that construction is not its "plain and ordinary meaning." See Hill-Rom, 755 F.3d at 1371. (See also K.Br. 10 (arguing Microsoft's position is "not far off").) Kaufman proposes that the "generating" occurs "upon being triggered by a user, without requiring further intervention by the user . . . ." What that "triggering event" is remains unclear, much less why it belongs in the claims. And rather than specify the relationship between "automatic" and the user intervention, it is unclear why Kaufman's construction requires and prohibits user intervention—or why this "intervention" must be imported into the claims.

In short, Kaufman's definition would not help a jury. <u>See generally Power–One, Inc. v.</u>

<u>Artesyn Techs., Inc.</u>, 599 F.3d 1343, 1348 (Fed. Cir. 2010) ("The [claim] terms, as construed by the court, must ensure that the jury fully understands the court's claim construction rulings and

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<sup>&</sup>lt;sup>3</sup> Microsoft submits that the plain meaning of the claim term permits some user intervention.

what the patentee covered by the claims." (internal quotation omitted)). "It is improper . . . to add 'extraneous' limitations to a claim, that is, limitations added wholly apart from any need to interpret what the patentee meant by particular words or phrases in the claim." <u>Hoganas AB v.</u>

<u>Dresser Indus., Inc.</u>, 9 F.3d 948, 950 (Fed. Cir. 1993) (internal quotation omitted).

Plaintiff's construction is unsupported and unnecessary, and should be rejected.

C. "... defining a user interface paradigm comprising a set of modes for interacting with a given database table, said modes comprising create, retrieve, update and delete, and a corresponding display format for each mode" (all claims)

Kaufman	Microsoft
For each of the specified modes of operation	" defining a set of user interfaces
(create, retrieve, update and delete), the	comprising a separate screen or window for
generated UI includes among its provided	each of the operations of creating, retrieving,
display formats at least one display format	updating, and deleting data in a given
which supports that operation.	database table" <sup>4</sup>

Microsoft's construction simplifies the claim language. Specifically, "user interface paradigm," "display format," and the relationship between the "display format," the "modes," and the "user interface paradigm" are not terms of art and thus may not be easily understood by a jury. They may, however, be simplified to reflect the clear intent of the written description and the claims. Further, the phrase "corresponding... for each" may be easily understood to mean different or separate—one for each. This understanding is supported by the specification. (Ex. 5, '981 patent, 4:5-12 (describing "mode" displayed in Figs. 1-4), 4:52-5:9 ("A set of 'modes' for interacting with a(ny) given database table (which modes, taken together, cover all desired enduser operations which may be effected upon such tables), and a corresponding display format ('screen' or 'window' architecture) for each mode"), Figs. 1-4.) It is further supported by the file history. (Ex. 6, '981 patent file history, Preliminary Amendment p. 7 (Oct. 26, 2007) ("Hecht

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<sup>&</sup>lt;sup>4</sup> Microsoft has modified its proposed construction in order to best capture the parties' dispute. (<u>Compare</u> D.I. 36.)

does not by any means teach how to construct a client application that . . . provides operating modes to create, retrieve, update and delete database data, and a corresponding display format for each mode, and displays table contents of the database for each of said modes in accordance with the corresponding display format." (emphasis added)).) See also Phillips, 415 F.3d at 1317 (discussing how the prosecution history can inform the meaning of the claim language). Similarly, the specification's discussion of "user interface paradigm," "modes," and "display format" support Microsoft's proposed construction, which focus on the "user interface" idea of the patent. (Ex. 5, '981 patent, 4:52-5:9, Figs. 1-4.)

Kaufman argues that Microsoft's proposed construction is at odds with the specification's requirement that the "operations should be supported by the complement of mode displays."

(K.Br. 13 (citing to '981 patent, 3:43-47, 12:24-27).) But the specification is referring to the later "representing, navigating, and managing relationships across tables" limitation, and discussing an embodiment where "a full complement of mechanisms" for "representing, navigating, and managing relationships across tables"—not for performing the CRUD operations—are each incorporated into its own screen or window.

Kaufman's proposed construction rearranges and modifies the limitation beyond recognition. White v. Dunbar, 119 U.S. 47, 51–52 (1886) (a patent claim is not a nose of wax). Kaufman also ignores express claim language (e.g., "corresponding . . . for each" and "user interface paradigm"). And in the case of "user interface paradigm," does so despite relying on the specification's discussion of the "paradigm." (See K.Br. 13 (citing '981 patent, 12:24-27); Ex. 5, '981 patent, 12:24-27 ("Following the paradigm, the generated UI comprises all mode displays for all tables, with integrated (-into-the-mode-displays) mechanisms for representing, navigating, and managing relationships across tables . . . .").)

Kaufman's proposed construction also creates ambiguity as to whether there is one interface for all modes or there is no requirement that each mode have its own corresponding "display format." See Interval Licensing LLC v. AOL, Inc., 766 F.3d 1364, 1373 (Fed. Cir. 2014) (rejecting plaintiff's construction as rendering the claims indefinite by introducing "facially subjective claim language without an objective boundary"). But the specification distinguishes the "modeless" interface scenario (covered by Kaufman's construction) from the claimed "moded" user interface paradigm:

Note, finally, that while the preferred embodiment operates according to the particular paradigm described above, it remains possible to effect alternate paradigms which would nevertheless be consistent with the basic principles of the invention. For instance, it may be desirable in some instances to realize instead a "modeless" UI paradigm, such that all end-user activities (browsing, searching, editing, adding) are supported by a single, unified display context (such as a "spreadsheet" display)

(Ex. 5, '981 patent, 11:14-22.) <u>Scimed</u>, 242 F.3d at 1341 (noting that where the specification makes clear the invention does not include a particular feature, the claims cannot be read to include that feature); <u>see also EMC Corp. v. Pure Storage, Inc.</u>, 77 F. Supp. 3d 402, 411–12 (D. Del. 2015) (construing term in light of patent's disavowal).

Lastly, Kaufman argues that the "delete" mode can be added to the "Edit-mode display." (K.Br. 12.) But the cited-to specification is discussing a "delete <u>capability</u>" and not a "display format" for a "delete" mode. (See Ex. 5, '981 patent, 5:63-6:3.) Likewise, Kaufman points to the specification's identification of the browse, search, edit, and add modes as support for the availability of different modes. (K.Br. 13; <u>see also Ex. 5</u>, '981 patent, 4:63-5:9 ("The paradigm encompasses: A set of modes . . . These modes comprise: Browse . . . Search . . . Edit . . . Add").) But these modes were not claimed. Indeed, the specification lacks any discussion of the claimed "display format" for the "delete" mode or the claimed "managing said relationships across tables" in the so-called "retrieve" mode.

Accordingly, Microsoft proposes a construction consistent with the plain meaning of the words of the claim, as clarified by the intrinsic evidence.

D. "... integrates into each said mode display processes for representing, navigating, and managing said relationships across tables, for selecting among said modes, and for navigating across said tables and interacting in accordance the selected mode with the data in the tables that are reached by said navigation, while observing and enforcing relational interdependencies among data across said tables" (all claims)

**Kaufman** Microsoft

Integrates into each said mode display one or more processes for representing, navigating, and managing said relationships across tables, selecting among said modes for tables reached by said navigation, and interacting in accordance with the selected mode with the data in the tables that are reached by said navigation, while observing and enforcing relational interdependencies among data across said tables.

The mode displays, taken together, provide the full complement of such processes. "... integrates into each distinct user interface comprising a screen or window processes for (1) representing, (2) navigating, and (3) defining the relationship between one table and another; for selecting among the user interfaces; and for navigating across said tables and interacting according with the selected user interface with the data in the tables that are reached by said navigation, while observing and enforcing relational interdependencies among data across said tables"

Under Microsoft's proposed construction, the "integrates" limitation is construed in accordance with (1) the intrinsic evidence, (2) terms construed from earlier limitations, (3) the plain and customary meaning of terms, and (4) any other grammatical changes to clarify the limitation for a jury.

First, "managing said relationships across tables" is discussed multiple times in the specification. (Ex. 5, '981 patent, Abstract, 3:31-32, 3:47, 3:49-50, 3:57, 4:15-16, 6:34-56, 12:17-29, Fig. 6.) The claim language and the specification show that "managing said relationships across tables" refers to how the relationship between two tables can change, or be "defined." (See, e.g., id. at 3:62-67 ("It further provides naming conventions and annotational methods for enhancing and extending the representation of table structures, constraints, and relationships within the back-end so as to more fully support revelation of the schema structure

through external interrogation.").) Further, "relationships <u>across</u> tables" are the relationships of the claimed relational database. The specification also clarifies that the "relationships" are part of the "data model" or "schema," not the "data," as Kaufman suggests. (<u>Id.</u> at 2:41-48 ("the organizational structure to be used by the back-end for storing data (that is, the complement of tables which store data, and the relational links between these tables)—known as a 'schema' or 'data model'"), 3:26-32 ("the application . . . reveals (and enforces) the relational/hierarchical organization among the tables within the back-end"), 11:50-56.)

In addition, Microsoft's construction of the "integrates" limitation simply carries over the "defining" limitation's construction, which includes the terms "mode" and "display format." It also corrects for the lack of antecedent basis for "said mode display." Any other changes from the claim language are consistent with the plain and customary understanding of the terms. For example, "across tables" may be more easily understood as "between one table and another."

(See Ex. 5, '981 patent, 3:63-67, 8:6-7, 11:33, 12:17-29, 13:66-67; Ex. 7, '066 patent file history, Response to Office Action p. 12 (Mar. 14, 2005) (noting "relationship" term "is defined in exactly the same way in Hecht: 'A relationship, also referred to as a relation or join, between any two record sources in a relational database . . . "").)

Finally, the limitation is lengthy and confusing. (<u>Compare</u> Ex. 6, '981 patent file history, Preliminary Amendment pp. 7-8 (Oct. 26, 2007).) By using semi-colons in addition to commas, and including numbering, Microsoft's proposed construction simplifies the limitation by making it more digestible.

In contrast, Kaufman's proposed construction adds limitations and ambiguity without explanation. (K.Br. 14-15.) The larger dispute, however, appears to be whether <u>all</u> of the modes can be available in a single interface (Kaufman's position), or if at least four interfaces are

required—one corresponding interface "for each" mode (Microsoft's position).

First, Kaufman's insertion of the phrase "one or more" means that the claimed processes (i.e., the three clauses that begin with "for") do not all need to be present. This is contrary to the plain language of the claim limitation, which repeatedly says "for each." Kaufman argues that the processes are those "relevant in the context of that display." (K.Br. 14.) But that test is subjective—how is one to know whether a process is relevant to "context of that display"? The limitation states that the three "processes" are "integrate[d] into each said mode display," and there are three claimed functions that must be integrated into each mode (or CRUD operation). Similarly, Kaufman's proposed construction adds a sentence and a limitation, presumably to support his earlier argument that the claimed CRUD operations must have the "full complement" of displays. (See K.Br. 13, 15.) But Kaufman fails to explain why a modified version of the "full complement" language must be imported into the claims here. The express language of the claims says "integrates into each said mode display," which is the opposite of Kaufman's construction. Further, the specification does not state that the displays must be "taken together" in order to arrive at the "full complement" of claimed processes. (Ex. 5, '981 patent, Abstract ("a full complement of mechanisms—integrated directly into the mode displays—for representing, navigating, and managing relationships across tables"), 3:43-47 ("a full complement of mechanisms, integrated into the mode displays for representing, navigating, and managing relationships across tables"); see also id. at 12:24-27.)

Kaufman also argues that each display need not "implement[] each and every such mechanism" for "representing, navigating, and managing relationships across tables." (K.Br. 15.)

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<sup>&</sup>lt;sup>5</sup> Microsoft submits that the claims require four modes (the CRUD operations), three processes (the three "for" clauses in the "integrates" limitation), and three functions ("representing," "navigating," and "managing").

But the claim language is consistent with the disclosed embodiment—both use "and" to connect the components of the mechanism—thus it is clear from the disclosure and the claim language that "each mode display" integrates, inter alia, mechanisms (or a process) "for representing, navigating, and managing relationships across tables."

Relatedly, Kaufman admits there is no written description in the specification for the "managing" limitation. (K.Br. 15 ("the 'Retrieve' mode displays of the specification, Figs. 1 and 2, provide for representing and navigating across tables, and selecting among modes, but not for 'managing said relationships across tables.").) Microsoft agrees. Kaufman's example also highlights the lack of support in the specification for the "delete" mode. For instance, Kaufman argues the "retrieve" mode is equivalent to the disclosed "browse" and "search." (K.Br. 15 (relying only on Figs. 1 and 2 to support the "retrieve" mode); see also Ex. 5, '981 patent, 4:5-8 (explaining Figs. 1 and 2 show the "browse" and "search" mode displays).) There are two other mode displays described in the specification: Figure 3 shows the "edit" mode and Figure 4 shows the "add" mode, which would presumably correspond to the claimed "update" mode and "create" mode, respectively. (Id. at 4:9-12.) There is no figure showing a mode display for "delete."

Accordingly, Microsoft respectfully requests the Court construe the claim consistent with the plain language of the claim and the intrinsic evidence, and adopt its construction.

## E. "representing . . . said relationships across tables" (all claims)

Kaufman	Microsoft
Visually representing at least the existence of	Plain and ordinary meaning, consistent with
a relationship from the data record(s) in the	the above construction, i.e., "representing
table being viewed to the corresponding data	the relationship between one table and
in another table (if any) that is related to the	another"
viewed-table data record(s), according to the	
data model for the database.	

The phrase "representing . . . said relationship across tables" should be construed

according to its plain and ordinary meaning, which is "representing . . . the relationship between one table and another." Kaufman agrees that "across tables" means "between one table and another." (K.Br. 16 ("For each relationship between two tables . . .").) Nothing in the specification satisfies the "stringent standard" required to depart from the plain meaning of this phrase. See Aventis Pharma S.A. v. Hospira, Inc., 675 F.3d 1324, 1330 (Fed. Cir. 2012).

Kaufman's proposed construction adds the word "visually" to "representing," but it is unclear why. (K.Br. 16-18 (describing "three mechanisms" allegedly illustrating "visually" representing relationships).) "Visually" does not appear anywhere in the specification. (See generally Ex. 5, '981 patent.) And Microsoft's construction does not preclude the "at least three mechanisms" Kaufman describes from "representing" the relationships in question.

Further, Kaufman adds limitations, i.e. "at least the existence of" and all the language that follows "relationship," without any explanation for rewriting this phrase. The phrases "at least the existence of" and "if any" introduces "facially subjective claim language without an objective boundary." Interval Licensing, 766 F.3d at 1373. And the proposed language following "relationship"—presumably to construe "said relationships across tables" according to its plain and ordinary meaning—does not offer any clarity for a jury as to what "across tables" means.

Rather than explain the lengthy proposed language, Kaufman argues that "the application generated in accordance with the Asserted Claims visually represents relationships between the data records in those tables." (K.Br. 16.) But Kaufman's proposed language imports limitations into the claim which are not in the specification:

- "the data record(s) in the table": "Data records" does not appear in the '981 patent. (See generally Ex. 5, '981 patent.)
- "data in another table": "Data in the tables" appears in the "integrates" limitation in the asserted claims within the phase "interacting in accordance the selected mode with the data in the tables that are reached by said navigation." (Id. at 377:34-38.)

• "the data model for the database": The preamble and limitation "(b)" of the asserted claims include a "data model." (<u>Id.</u> at 377:8-11 ("in accordance with a data model comprising . . ."), 377:22 ("said data model"), 377:52-54, 378:7-8, 378:27-29, 378:39.)

A proposed claim construction that would import an additional limitation into the claim should be rejected. Home Diagnostics, Inc. v. LifeScan, Inc., 381 F.3d 1352, 1359 (Fed. Cir. 2004); Scanner Techs. Corp. v. Icos Vision Sys. Corp., N.V., 486 F. Supp. 2d 330, 342 (S.D.N.Y. 2007), aff'd in part, rev'd in part on other grounds, 528 F.3d 1365 (Fed. Cir. 2008) ("In construing a claim, the court may not import an additional limitation into the claim.").

Finally, Kaufman's proposed construction for "said relationships across tables" is internally inconsistent with his proposed constructions for the identical language in two other claim terms. (See K.Br. Sections 6 & 7; see also infra Sections IV.F & G.) Thus, the proposed construction cannot be correct because it violates one of the canons of claim construction:

[T]he same terms appearing in different portions of the claims should be given the same meaning unless it is clear from the specification and prosecution history that the terms have different meanings at different portions of the claims. If possible, this court construes claim terms in a manner that renders the patent internally consistent.

Frank's Casing Crew & Rental Tools, Inc. v. Weatherford Int'l, Inc., 389 F.3d 1370, 1377 (Fed. Cir. 2004) (internal citations and quotations omitted). Here, the phrase in question—"said relationships across tables"—appears in the same portion of the claims for all three claim terms. (See Ex. 5, '981 patent, 377:31-33, 378:14-16, 378:47-49; see also supra Section IV.D.) Yet, Kaufman proposes three very different constructions:

"representing"	"navigating"	"managing"
Visually representing at least	For the visually	Managing the relationships of
the existence of a relationship	represented cross-table	records in a given table with
from the data record(s) in	relationships, navigating	corresponding records in a
the table being viewed to the	from the data in the	related table, for example, by
corresponding data in	viewed table to a	way of a dropdown that limits
another table (if any) that is	display of the data in a	selection of an added or edited
related to the viewed-table	related table that is	value for a record in the given

data record(s), according to	specifically related to	table to the permissible values
the data model for the	the viewed-table data	as exist within the records of
database.	record.	the related table.

Kaufman has not argued or shown that "it is clear from the specification and prosecution history that the terms have different meanings at different portions of the claims," Frank's Casing Crew, 389 F.3d at 1377, so there is no basis for construing these claim terms differently. Thus, Kaufman's proposed construction should be rejected.

## F. "navigating . . . said relationships across tables" (all claims)

Kaufman	Microsoft
For the visually represented cross-table	Plain and ordinary meaning, consistent with
relationships, navigating from the data in the	the above construction, i.e., "navigating
viewed table to a display of the data in a	the relationship between one table and
related table that is specifically related to the	another"
viewed-table data record.	

The phrase "navigating . . . said relationship across tables" should be construed according to its plain and ordinary meaning, which is "navigating . . . the relationship between one table and another." Kaufman agrees that "across tables" means "between one table and another." (See supra Section IV.E.) Kaufman fails to explain how his proposed construction is the plain and ordinary meaning or how it meets the "stringent standard" required to depart from the plain and ordinary meaning. See Aventis Pharma, 675 F.3d at 1330.

Kaufman adds a limitation, restricting "navigating" to "the visually represented crosstable relationships." This phrase is not in the claims or in any of Kaufman's other proposed constructions. See Encap LLC v. Oldcastle Retail Inc., No. 11-C-808, 2012 WL 2339095, at \*4 (E.D. Wis. June 19, 2012) (noting defendant's constructions "import[ed] additional limitations to the term, nowhere found in the claims, specification or evidence"). In adding this limitation, Kaufman also removes "said relationships." Kaufman's construction renders the claims internally inconsistent, which is improper. See Frank's Casing Crew, 389 F.3d at 1377.

Next, Kaufman construes the phrase "across tables" to mean "from the data in the viewed table to a display of the data in a related table that is specifically related to the viewed-table data record." Like his previous construction, Kaufman adds limitations (e.g., "data in the viewed table," "specifically related") and uses terminology not found in the patent (e.g., "viewed table," "related table," "data record"), without explaining why this language is necessary or how this language clarifies the limitation for a jury. Indeed, it is unclear what Kaufman's proposed terminology means. And as discussed above, Kaufman's construction for the phrase "said relationships across tables" is improper. (See supra Section IV.E.) Thus, Kaufman's proposed construction is unsupported and inconsistent and should be rejected.

## G. "managing said relationships across tables" (all claims)

Kaufman	Microsoft
Managing the relationships of records in a	Plain and ordinary meaning, consistent with
given table with corresponding records in a	the above construction, i.e., "defining the
related table, for example, by way of a	relationship between one table and another"
dropdown that limits selection of an added or	
edited value for a record in the given table to	
the permissible values as exist within the	
records of the related table.	

Microsoft's proposed construction of "managing" is supported by the specification. The specification explains that "managing" relationships comprises a number of actions, which viewed together, amount to "defining" the relationship:

A set of "relationship types" between individual database tables (which types, taken together, cover all desired connections between any two tables), and a corresponding UI convention for representing each type of relationship "in-place" within the (single-table mode displays. As shown in FIG. 6, these "relationship types" comprise:

CROSS-REFERENCE 602 (a.k.a. "foreign key" or "FK")—single primary-table

<sup>6</sup> In view of Kaufman's opposition to and interpretation of Microsoft's plain and ordinary meaning construction, and to streamline the parties' disputes, Microsoft no longer seeks its alternative construction. (See D.I. 36.)

record keeps pointer to any single foreign-table record

MASTER/DETAIL 604 (a.k.a. "parent/child" or "one-to-many")—multiple foreign-table records keep pointers to single primary-table record

(Ex. 5, '981 patent, 6:34-45.)

In certain situations, it may be desirable during schema interrogation to "deduce" relational interdependencies between tables where no explicit referential-integrity constraints have been defined. In such cases, it is possible to further compare field-names and associated attributes across tables, so as to identify columns which (for instance) are identically named, and (only) one of which is the primary key for its respective table. Under these conditions, it could (optionally) be assumed that the other-table column is a foreign-key cross-reference to the first column.

(Id. at 24:9-19; see also id. at 6:48-56.) Rather than take issue with Microsoft's construction of "managing" to mean "defining," Kaufman takes issue with what is being "managed." Specifically, Microsoft's proposed construction of "managing" is directed to the relationships themselves whereas Kaufman's construction focuses on "the data [that] affect[s] relationships." (K.Br. 20 (emphasis added).) At bottom, Kaufman proposes to rewrite the limitation. As discussed above, Kaufman's proposed construction is flawed, particularly in his construction of "said relationships across tables." (See supra Section IV.E.) If the patentee had meant for the "relationships across tables" to refer to the data within tables, then he should have replaced the word "relationships" with the word "data" in the limitation. Chef Am., 358 F.3d at 1374 (claims are construed "based on the patentee's version of the claim as he himself drafted it"). He did not do so and should not be heard to make that argument now.

Moreover, "for example" is not a clear definition and so precludes Kaufman's construction from being clearly understood. See Merck & Co. v. Teva Pharm. USA, Inc., 395

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<sup>&</sup>lt;sup>7</sup> For example, Kaufman argues that Microsoft's construction of "managing" would require user interaction, or "the ability to go back and revise," but admits that his construction would allow for "manipulation" or "alter[ation of] the connections." (K.Br. 20.)

F.3d 1364, 1370 (Fed. Cir. 2005). An "example" is included in a construction when supported by specific language in the specification. See Vivus, Inc. v. Actavis Labs. FL Inc., No. CV143786SRCCLW, 2016 WL 3919455, at \*8 (D.N.J. July 20, 2016) (plaintiff pulled its construction of a disputed term from an express definition in the specification); Aventis Pharm.

Inc. v. Impax Labs., Inc., No. CIV.A. 02-1322 GEB, 2011 WL 94188, at \*7 (D.N.J. Jan. 11, 2011) (construing disputed term to include a "for example" where the patent presented the term with lists of examples and without additional guidance). It is unclear from Kaufman's construction and specification support whether the "dropdown" example is the only way to "manage . . . said relationships across tables" or how it is supposed to achieve this function.

Accordingly, Microsoft requests the Court construe "managing said relationships across tables" to mean "defining the relationship between one table and another."

# H. "while observing and enforcing relational interdependencies among data across said tables" (all claims)

Kaufman	Microsoft
All stated navigation, management, and	Plain and ordinary meaning.
interaction is carried out consistent with, and	
preventing violation of, all cross-table	
interdependencies, e.g., so as to preserve the	
referential integrity of the relational database.	

This phrase uses language easily understood by those of ordinary skill in the art, and therefore requires no departure from its plain and ordinary meaning.

Kaufman admits that his proposed construction departs from the plain meaning, (K.Br. 22,) but "preventing confusion" is not sufficient reason to depart from the plain meaning. See Aventis Pharma, 675 F.3d at 1330 (noting the "stringent standard" for deviating from plain meaning). Further, it is unclear what confusion Kaufman alleges, or how it is bettered by his construction. (See K.Br. 22.) The specification refers to "relational interdependencies" once and

does not clearly define it: "In certain situations, it may be desirable during schema interrogation to 'deduce' relational interdependencies between tables where no explicit referential-integrity constraints have been defined." (Ex. 5, '981 patent, 24:9-12.) The terms "observing," "enforcing," "relational interdependencies," and "data across said tables" are easily understood.

Under cover of "preventing confusion," Kaufman seeks to rewrite the phrase without explaining how the specification supports the additional words or identifying the correlation between the original claim phrase and the proposed construction. First, Kaufman includes only three actions, "navigation, management, and interaction," but the "integrates" limitation identifies three processes and three functions, which cannot be summarized as "navigation, management, and interaction." (See supra Section IV.D.) Kaufman does not explain why he includes these three. Second, Kaufman does not explain where "violation" or "cross-table" come from. Third, Kaufman asserts, without support, that "observing and enforcing relational interdependencies" means "referential integrity." (K.Br. 22; see also id. at 14, 21.) Last, examples unsupported by specific language in the specification have no place in a construction.

Cf. Aventis Pharm., 2011 WL 94188, at \*7. Kaufman relies on one excerpt of the specification in support of its construction (see K.Br. 22 (quoting '981 patent, 3:26-32)); this portion of the specification does not even mention "referential integrity" let alone the words "for example."

Thus, Kaufman's construction is unsupported and unnecessary and should be rejected.

### V. INDEFINITENESS

The claims of a patent must "particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention." 35 U.S.C. § 112, ¶ 2. A claim fails to satisfy this statutory requirement and is thus invalid for indefiniteness if its language, when read in light of the specification and the prosecution history, "fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention." Nautilus, Inc. v. Biosig

<u>Instruments, Inc.</u>, 134 S. Ct. 2120, 2124 (2014). In the context of computer-implemented inventions with claim terms subject to § 112, ¶ 6, a claim term is indefinite if the specification fails to disclose an algorithm for performing the claimed function. <u>See Williamson</u>, 792 F.3d at 1352; see also Media Rights, 800 F.3d 1371–73.

Several terms of asserted claims 1, 4, and 5 are indefinite for failure to disclosure sufficient acts or structure. Prior to the parties' submission of the LPR 11 Joint Claim Term Chart, Microsoft advised Kaufman of its position regarding indefiniteness. Kaufman failed to identify any acts or structure for the limitations in question.<sup>8</sup> (D.I. 36.) Even now, Kaufman refuses to identify acts or structure for these limitations. (K.Br. 2 n.1.) Kaufman's position prejudices Microsoft because Microsoft will not know what acts or structure purportedly supports these functions until Kaufman's reply.

# A. The Court should construe the "machine-readable routines to . . ." and "a routine for . . ." limitations of claims 4 and 5 as means-plus-function elements

Although claims 4 and 5 do not use the word "means," their three lettered limitations are nevertheless subject to construction pursuant to 35 U.S.C. § 112, ¶ 6. See Williamson, 792 F.3d at 1349 (to rebut the presumption that § 112 ¶ 6 does not apply, a party must "demonstrate[] that the claim term [1] fails to 'recite sufficiently definite structure' or else [2] recites a 'function without reciting sufficient structure for performing that function.""). The functions in the three lettered limitations of claims 4 and 5 are nearly identical but the first words differ:

Claim 4	Claim 5
(a) machine-readable routines to	(a) a routine for
(b) machine-readable routines for	(b) a routine for
(c) machine-readable routines for	(c) a routine for

<sup>&</sup>lt;sup>8</sup> The Patent Local Rules of the Northern District of California, which controlled the parties' LPR 6 and 7 disclosures, requires identification of the corresponding structure for those terms which any party contends is governed by § 112 ¶ 6. N.D. Cal. P.L.R. 4-2(a).

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The claimed "machine-readable routines to" and "a routine for" of claims 4 and 5 are functional terms no different from the "module" of Williamson. These terms are synonymous with generic computer software and connote "a generic 'black box' for performing the recited computer-implemented functions." Williamson, 792 F.3d at 1350; see generally M.P.E.P. § 2181; Epic Tech., LLC v. Fitnow, Inc., 151 F. Supp. 3d 1245, 1251 (D. Utah 2015) (discussing "routines, or other program modules" associated with a general purpose computer). The phrases are not used to designate structure. See Advanced Ground, 830 F.3d at 1348. And they do not include any prefix or any modifiers to potentially change the meaning. See Williamson, 792 F.3d at 1351 (finding the prefix "distributed learning control" did not impart structure into the term "module"). The lettered limitations for claims 4 and 5, shown below for claim 4, recite functions performed by program code without reciting sufficient structure for performing that function—it is a result for each function, namely providing, scanning and using:

- 4.(a) . . . provide an output stream for user display and input devices, defining a user interface paradigm comprising a set of modes for interacting with a given database table, said modes comprising create, retrieve, update and delete, and a corresponding display format for each mode;
- 4.(b) . . . scanning said database and applying a body of rules to determine the table structures, constraints and relationships of said data model, and for storing representations thereof; and
- 4.(c) . . . using said representations to construct a corresponding client application, wherein said client application provides a connection to said database, provides displays of the table contents of said database for each of said modes in accordance with the display formats of said paradigm, integrates into each said mode display processes for representing, navigating, and managing said relationships across tables, for selecting among said modes, and for navigating across said tables and interacting in accordance the selected mode with the data in the tables that are reached by said navigation, while observing and enforcing relational interdependencies among data across said tables.

Thus, the claim 4 and 5 limitations are subject to §  $112 \ \P 6$ .

B. The "machine-readable routines to ..." and "a routine for ..." limitations of claims 4 and 5 lack sufficient structural disclosure in the specification and are indefinite

After determining that these claims are subject to construction as means-plus-function claims, the Court must look to the specification to determine the appropriate corresponding structure. Under Williamson, the issue is what structure, if any, disclosed in the specification corresponds to the claimed function. 792 F.3d at 1352. "Simply disclosing a black box that performs the recited function is not a sufficient explanation of the algorithm required to render the means-plus-function term definite." Augme Techs., Inc. v. Yahoo! Inc., 755 F.3d 1326, 1338 (Fed. Cir. 2014).

Kaufman admits the specification lacks sufficient description of a number of limitations, e.g., "(a) . . . defining a user interface paradigm comprising a set of modes . . . , said modes comprising . . . delete . . ." and "(c) . . . managing said relationships across tables . . . ." (See K.Br. 12-13, 15; see supra Section IV.D.) By Kaufman's admission, at least limitations (a) and (c) are indefinite for failure to disclose sufficient structure in the specification corresponding to all functions in the limitation.

Limitation (b) fares no better. For example, limitation (b) includes the function "scanning said database" and the only corresponding disclosure in the specification is a generic recital of the function as to the relational database management system:

In order to generate the UI, the RDBMS is first interrogated or scanned by this software, applying a body of rules to interpret the data model (comprising its tables; their column-complements, datatypes, and constraints; and relationships across the tables).

(Ex. 5, '981 patent, 11:29-39.) No scanning algorithm is disclosed in the specification, nor are the "body of rules to interpret the data model" defined. For at least these reasons, the "machine-readable routines to" and "a routine for" limitations of claims 4 and 5 are indefinite.

# C. The parallel "providing . . ." and "causing . . ." limitations of claim 1 should be construed under 35 U.S.C. § 112 $\P$ 6 and held as indefinite

Claim 1 is a method claim with lettered limitations parallel to the above limitations of claims 4 and 5, but the first words of claim 1 differ:

Claim 1	Claim 4	Claim 5
(a) providing an output stream	(a) machine-readable	(a) a routine for
from said server	routines to	
(b) causing said server	(b) machine-readable	(b) a routine for
	routines to	
(c) causing said server	(c) machine-readable	(c) a routine for
	routines to	

The phrases "providing an output stream from said server" and "causing said server" are nothing more than verbal constructs used to refer to undefined program code, i.e., software for accomplishing the recited function. Generic descriptions for software that perform a specified function, like the module in Williamson and the program code here, do not connote sufficient structure. 792 F.3d at 1350–51. In Media Rights, the court applied § 112, ¶ 6 to a method claim where the disputed term ("compliance mechanism") did not include the word "means" but the claim language simply recited functions for the term and the specification failed to define the term in specific structural terms. 800 F.3d 1372–73. Here, the phrases "providing an output stream from said server" and "causing said server" are followed by functional language nearly identical to that of claims 4 and 5. And the functions "providing an output stream from said server" and "causing said server" with their corresponding limitations are not found in the specification. Thus, the lettered limitations of claim 1 are subject to § 112, ¶ 6, and are indefinite for the same reasons as claims 4 and 5.

## VI. CONCLUSION

For the foregoing reasons, Microsoft respectfully request that this Court adopt their proposed claim constructions and find claims 1, 4, and 5 invalid as indefinite.

### FISH & RICHARDSON P.C.

## By: /s/ Leah A. Edelman

Leah A. Edelman (LE7384) edelman@fr.com Ahmed J. Davis (*Pro Hac Vice*) adavis@fr.com 1425 K Street, N.W., 11th Floor Washington, D.C. 20005 Telephone: (202) 783-5070

Karolina Jesien (KJ7292) jesien@fr.com 601 Lexington Avenue, 52nd Floor New York, New York 10022 Telephone: 212-765-5070

Jason W. Wolff (*Pro Hac Vice*) wolff@fr.com 12390 El Camino Real San Diego, CA 92130 Telephone: (858) 678-5070

ATTORNEYS FOR DEFENDANT MICROSOFT CORPORATION

## **CERTIFICATE OF SERVICE**

I hereby certify that on December 6, 2016, I electronically filed the foregoing document with the Clerk of the Court using the CM/ECF system which will send notification of such filing to all attorneys of record.

<u>/s/ Elizabeth Wilton</u> Elizabeth Wilton